

Ka-Band PAA for Satellite Telemetry System for RLVs & Aircraft, Phase II

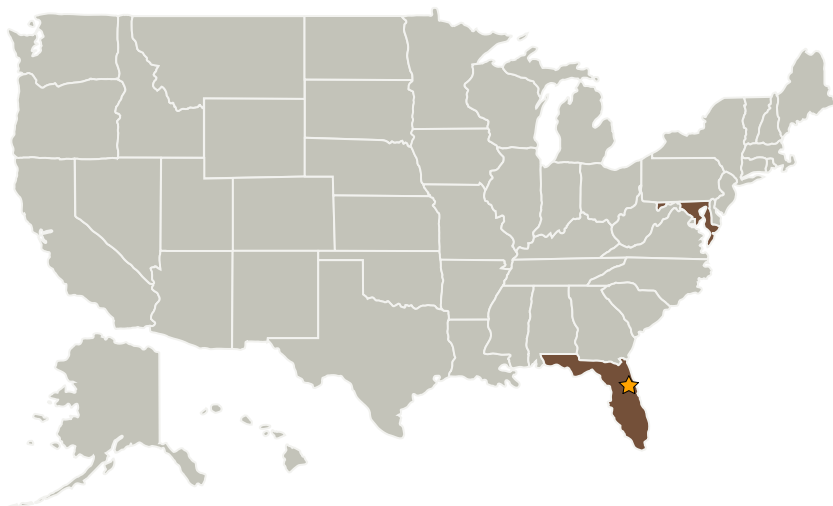
Completed Technology Project (2003 - 2005)



Project Introduction

The development and implementation of passive phased array antennas (PAAs) offers significant performance benefits over the current active arrays. The keys to successful development are the low-loss phase shifters and the integration of these phase shifters into a modular and scaleable antenna architecture for broad utilization for high data rate communications. The Phase 1 effort demonstrated a 3.0 dB 360-degree finline phase shifter at 25.25 to 27.5 GHz. The proposed effort will build on this Phase I phase shifter development and include the design, simulation, testing and integration of the rest of the antenna design and packaging for ease of manufacturing and scalability such that ~15dBi gain antenna is built and delivered to NASA for evaluation.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
Paratek Microwave, Inc.	Supporting Organization	Industry	Columbia, Maryland



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Kennedy Space Center (KSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations

Florida

Maryland

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Project Manager:

Frederick M Mckenzie

Principal Investigator:

Cornelius Du Toit

Technology Areas

Primary:

- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
 - └ TX05.2 Radio Frequency
 - └ TX05.2.6 Innovative Antennas